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International Bureau

## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :  A01N 43/04, A61K 31/70		A1	(11) International Publication Number: <b>WO 98/43478</b>  (43) International Publication Date: 8 October 1998 (08.10.98)																					
<p>(21) International Application Number: PCT/US98/06371</p> <p>(22) International Filing Date: 1 April 1998 (01.04.98)</p> <p>(30) Priority Data:</p> <table> <tr> <td>08/833,457</td> <td>1 April 1997 (01.04.97)</td> <td>US</td> </tr> <tr> <td>08/881,227</td> <td>24 June 1997 (24.06.97)</td> <td>US</td> </tr> <tr> <td>08/902,615</td> <td>29 July 1997 (29.07.97)</td> <td>US</td> </tr> </table> <p>(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Applications</p> <table> <tr> <td>US</td> <td>08/833,457 (CON)</td> </tr> <tr> <td>Filed on</td> <td>1 April 1997 (01.04.97)</td> </tr> <tr> <td>US</td> <td>08/881,227 (CON)</td> </tr> <tr> <td>Filed on</td> <td>24 June 1997 (24.06.97)</td> </tr> <tr> <td>US</td> <td>08/902,615 (CON)</td> </tr> <tr> <td>Filed on</td> <td>29 July 1997 (29.07.97)</td> </tr> </table> <p>(71) Applicants (for all designated States except US): MERIEUX ORAVAX SOCIETE EN NOM COLLECTIF PASTEUR MERIEUX SERUMS ET VACCINS S.A. [FR/FR]; 58, avenue Leclerc, F-69007 Lyon (FR). HUMAN GENOME SCIENCE, INC. [-US]; 9410 Key West Avenue, Rockville, MD 20850 (US).</p>		08/833,457	1 April 1997 (01.04.97)	US	08/881,227	24 June 1997 (24.06.97)	US	08/902,615	29 July 1997 (29.07.97)	US	US	08/833,457 (CON)	Filed on	1 April 1997 (01.04.97)	US	08/881,227 (CON)	Filed on	24 June 1997 (24.06.97)	US	08/902,615 (CON)	Filed on	29 July 1997 (29.07.97)	<p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (for US only): KLEANTHOUS, Harold [GB/US]; 89 Madison Avenue, Newtonville, MA 02160 (US). AL-GARAWI, Amal [SA/US]; 32 Garrison Street #4501, Boston, MA 02114 (US). MILLER, Charles [US/US]; 32 Maple Avenue, Medford, MA 02155 (US). TOMB, Jean-François [-US]; 3501 St. Paul Street, Baltimore, MD 21222 (US). OOMEN, Raymond, Peter [CA/CA]; R.R #1, 5400 Lloydtown-Aurora Sideroad, Schomberg, Ontario L0G 1T0 (CA).</p> <p>(74) Agent: CLARK, Paul, T.; Clark &amp; Elbing LLP, 176 Federal Street, Boston, MA 02110-2214 (US).</p> <p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published With international search report.</p>	
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<p>(54) Title: IDENTIFICATION OF POLYNUCLEOTIDES ENCODING NOVEL <i>HELICOBACTER</i> POLYPEPTIDES IN THE <i>HELICOBACTER</i> GENOME</p> <p>(57) Abstract</p> <p>The invention provides <i>Helicobacter</i> polypeptides that can be used in vaccination methods for preventing or treating <i>Helicobacter</i> infection, and polynucleotides that encode these polypeptides. The invention also provides diagnostic methods employing these polypeptides.</p>																								

CC complexity of the parasitic lifecycle, and provide new targets for  
 CC vaccine and drug development. Parasite resistance to drugs and mosquito  
 CC resistance to insecticides have led to a resurgence of malaria in many  
 CC parts of the world, and there is a pressing need for vaccines and new  
 CC drugs. AAA70078 to AAA70287 and AAB13352 to AAB13352 represent nucleotide  
 CC and protein sequences given in the present invention, but which are not  
 XX specifically mentioned within the specification.

SQ Sequence 1245 AA;

Query Match 13.2%; Score 69; DB 21; Length 1245;  
 Best Local Similarity 27.8%; Pred. No. 16;

Matches 25; Conservative 12; Mismatches 33; Indels 20; Gaps 3;

Qy 22 SNKNTLVSLKKKKPFLHYCIVYIPLVPLKLIIFDIAPIPKSLISOFONNHYH- -T 78  
 DB 1069 SNNYKEFIIKKKKLKLCKYIMKSFHPHI----LDEFWFNLSCQNEIKNIVKNLHEVIS 1124

Qy 79 NHNTNNNIRFNHIS----NCT 95  
 DB 1125 LHNSSTIDFELKHNFLINKFIFNTNSINCCT 1154

RESULT 11  
 AAW98706 ID AAW98706 standard; Protein; 346 AA.

XX DT 31-MAR-1999 (first entry)  
 AC AAW98706;  
 XX DE H. pylori GHPO 727 protein.

XX GHPO protein; Helicobacter infection; gastroduodenal disease; gastritis;  
 KW peptic ulcer disease.  
 XX OS Helicobacter pylori.

PN W09843478-A1  
 XX PD 08-OCT-1998.  
 XX PF 01-APR-1998; 98WO-US06371.

XX PR 29-JUL-1997; 97US-0902615.  
 PR 01-APR-1997; 97US-0833457.  
 PR 24-JUN-1997; 97US-0881227.

XX (HUMA-) HUMAN GENOME SCI INC.  
 PA (INMR ) MERIEUX ORAVAX PASTEUR MERIEUX SERUMS.

PI Al-Garawi A, Kleanthous H, Miller C, Oomen RP, Tomb J; 20541PA  
 DR WPI: 1998-542293/46.  
 XX PS N-PSDB; AAX14435.

PT New isolated Helicobacter polynucleotides - used to develop products  
 PT for the diagnosis, prevention and treatment of Helicobacter  
 PT infections and gastrulointestinal diseases  
 XX PS Claim 8; Page 1482-1484; 2054pp; English.

XX This sequence represents a Helicobacter pylori GHPO protein of the  
 CC invention. The polypeptides can be used for preventing or treating  
 CC Helicobacter infections, and gastrulointestinal diseases associated with  
 CC these infections, including acute, chronic, and atrophic gastritis, and  
 CC peptic ulcer diseases, e.g. gastric and duodenal ulcers. They can also be  
 CC used for the production of antibodies. The products can also be used for  
 CC detection and diagnosis.

XX SQ Sequence 346 AA;

XX 13.0%; Score 68; DB 19; Length 346;

Best Local Similarity 26.3%; Pred. No. 4.7;  
 Matches 26; Conservative 12; Mismatches 45; Indels 16; Gaps 3;

Qy 11 HFKV----TFWENDLSNNKTLVSLKKKKPFLHYCIVYIPLVPLKLI----FDIAF 59  
 DB 146 HFKIKSVTSTYQWSGAGNKGKTESKNEKTALECLBKDPIDLNQVAGAFAYPIAF 205

Qy 60 IPKSLISQFQNHYHNN----HTNHNNTNNNIRFNHISNC 93

DB 206 NAIAHIDTFKENGTYKEELKMLHETHRIMGVDFPISATC 244

RESULT 11  
 ABB49049  
 ID ABB49049 standard; Protein; 907 AA.

XX AC ABB49049;  
 XX DT 05-FEB-2002 (first entry)  
 DE Listeria monocytogenes protein #1753.  
 XX KW Antibacterial; gene therapy; vaccine; biosynthesis; biodegradation;  
 KW vitamin B12; bacterial infection; disease.

XX OS Listeria monocytogenes.  
 XX PR WO20017335-A2.  
 XX PN XX  
 XX PD 18-OCT-2001.  
 XX PR 11-APR-2001; 2001WO-FR01118.  
 XX PR 11-APR-2000; 2000FR-0004629.  
 XX PA (INSP ) INST PASTEUR.

XX PI Buchrieser C, Frangeul L, Couve E, Rusniok C, Fsihi H, Dehoux P;  
 PI Dussurget O, Chertouani F, Nedjari H, Glaser P, Kunst F, Cossart P;

PI Daniels J, Goebel W, Kreft J, Kuhn M, Ng E, Vazquez-Boland JA;  
 PI Dominguez-Bernal G, Garrido-Garcia P, Thierres-Martinez A, Amend A;

PI Chakraborty T, Domann E, Hain T, Berche P, Charbit A, Durant L;  
 PI Perez-Diaz J, Baquero F, Garcia Del Portillo F, Gomez-Lopez N;  
 PI Madueno E, De Pablos B, Wehland J, Kaasst U, Entian K, Hauf J;

PI Rose M, Voss H;  
 XX DR WPI; 2002-010914/01.

XX PS Claim 6; SEQ ID No 1754; 192pp; French.

CC The present invention relates to the genome sequence of *Listeria*  
 CC monocytes and fragments of *Listeria* monocytes (see ABA03041). The genome sequence and fragments of  
 CC monocytes and related organisms, and for detecting genes in *L.*  
 CC polymorphisms and other genomes. The present invention. Proteins  
 CC encoded by the genome sequence is a protein  
 CC expressed from the genome sequence of the present invention. Proteins  
 CC for biosynthesis and biodegradation, especially biosynthesis of Vitamin  
 CC B12. The genome sequence and proteins encoded by it are also useful for  
 CC selecting compounds that regulate gene expression and cell replication  
 CC and modulate *L.* monocytes related diseases. In addition, the genome  
 CC sequence and proteins encoded by it are useful in pharmaceutical and  
 CC vaccines compositions for the treatment or prevention of infections by *L.*  
 CC monocytes and related organisms.

CC Note: The sequence data for this patent did not form part of the printed  
 CC specification, but was obtained in electronic format directly from WIPO  
 CC at [ftp://wipo.int/pub/published\\_pct\\_sequences](ftp://wipo.int/pub/published_pct_sequences).

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